

GLACIOLOGY.

- (a) Observations on the pack-ice.
- (b) Observations on sledging journeys of the inland-ice.
- (c) Observations on the coastal glaciers, tongues, and shelf-ice.

METEOROLOGY.

- (a) Two years' observations at Macquarie Island by Ainsworth.
- (b) Two years' observations at Adelie Land by Madigan.
- (c) A year's observations at Queen Mary Land by Moyes.
- (d) Ship's observations on each of the voyages.
- (e) Observations on sledging journeys.

BACTERIOLOGY.

In Adelie Land Dr. McLean carried out many months of steady work.

TIDES.

Self-recording instruments were run at Macquarie Island by Ainsworth, and at Adelie Land by Bage.

WIRELESS AND AURORAL OBSERVATIONS.

Very close watch was kept upon auroral phenomena with interesting results, especially in their relation to the permeability of the æther to wireless waves.

GEOGRAPHY.

- (1) The successful navigation by the ship of the Antarctic pack-ice in a fresh sphere of action, where the conditions were practically unknown. This resulted in the discovery of new lands and islands.
- (2) Journeys have been made over the sea-ice and the continental plateau in regions never before sledged over. At the main base journeys aggregating 2400 miles were made, and at the western base journeys of 800 miles. These figures do not include dépôt journeys, supporting parties, or relay work. The land has been followed through 33° of longitude, 27° of which were covered by sledging parties.
- (3) The fixing of a fundamental meridian in Adelie Land, using wireless telegraphy.
- (4) By soundings the continental slopes, and in most cases the shelf itself, have been indicated through 55° of longitude.
- (5) The mapping of Macquarie Island.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

LIVERPOOL.—Mr. T. B. Abell has been appointed to the Alexander Elder chair of naval architecture, rendered vacant by the resignation of his brother, Prof. W. S. Abell.

LONDON.—The University College Committee will shortly proceed to appoint a lecturer and demonstrator in anatomy at a salary of 350*l.* Applications must reach the secretary of University College on or before July 11.

MANCHESTER.—Dr. Niels Bohr, of the University of Copenhagen, has been appointed reader in mathematical physics. For some time Dr. Bohr was engaged in research in the physical department of the University of Manchester, and has made a close study of mathematical physics. He has contributed a series of important original papers on the constitution of atoms, molecules, and the origin of spectra. This work has attracted much attention, and has formed the starting point of numerous research now in progress.

SHEFFIELD.—The council of the University has appointed Mr. H. J. W. Hetherington to the post of lecturer in philosophy, in succession to Mr. T. Loveday, resigned.

On their way home from Australia, the following men of science who are attending the British Association meeting, will, the *Pioneer Mail* states, lecture on the subjects named for the University of Calcutta:—Prof. H. H. Turner, on pure mathematics; Prof. Ernest W. Brown, on applied mathematics; Prof. H. E. Armstrong, on chemistry; Prof. W. M. Hicks, on physics; and Prof. W. Bateson, on biology.

We have received the Livingstone College Year Book for 1914. This college, which has now reached its twentieth session, is doing good work in giving a training in the elements of medicine and first aid to missionaries. The principal, Dr. Harford, has resigned, after twenty-one years' service, and Dr. Loftus Wigram has been appointed to succeed him. An appeal has been issued for 10,000*l.* in order to clear off the debt and to effect improvements to the college property.

We learn from *Science* that the Sheffield Scientific School, Yale University, has received a provisional gift from one of its graduates of 20,000*l.* This gift is contingent upon an additional 20,000*l.* being secured. From the same source we learn that the Gustavus Adolphus College, St. Peter, Minnesota, has completed an endowment fund of 50,000*l.* The two largest contributors were Mr. J. J. Hill, of St. Paul, and Mr. C. A. Smith, of Minneapolis, each of whom gave 10,000*l.*

In reply to questions asked by Sir Philip Magnus in the House of Commons on June 29, Mr. Pease said that the Government certainly contemplates the reconstitution of the University of London, but not a new London University, distinct and separate from the present University. Mr. Pease does not suppose the Departmental Committee appointed to frame a Bill to give effect to the recommendations of the Royal Commission on University Education in London will be able to submit its report before the close of the session.

On the occasion of the tercentenary of the founding of Groningen University, the following honorary degrees have been conferred:—*Doctor of Medicine*, Sir Edward Schäfer (Edinburgh) and Prof. J. N. Langley (Cambridge); *Doctor of Letters*, Prof. W. M. Lindsay (St. Andrews) and Principal Peterson (McGill University, Montreal); *Doctor of Dutch Letters*, Prof. A. S. Napier (Oxford); *Doctor of Geology and Mineralogy*, Dr. A. L. Day (Washington); *Doctor of Botany and Zoology*, Prof. S. J. Hickson (Manchester); and *Doctor of Political Science*, Lord Reay and Mr. Carnegie.

It is announced in the issue of *Science* for June 12 that Mr. Andrew Carnegie has added, presumably from the income of the Carnegie Corporation, 400,000*l.* to the endowment of the Carnegie Institute of Pittsburgh, to be equally divided between the institute and the school of technology. Mr. Carnegie's gifts to these institutions now amount to 4,800,000*l.* From the same source we learn that by the will of the late Judge J. F. Dillon, Iowa State University receives 2000*l.* and Iowa College and Cornell College 200*l.* each. An additional gift of 5000*l.* has been received by Oberlin College for carrying out the general building plans and the improvement of the grounds. The old students of the University of Illinois are planning to erect a 30,000*l.* building as a memorial to Dr. J. M. Gregory, first president of the University.

THE Board of Agriculture and Fisheries proposes to award the following scholarships, tenable for three years from October 1 next. Three agricultural science scholarships of the value of 150*l.* per annum, open to students who have graduated with honours in science at a British University; two veterinary research scholarships of the value of 150*l.* per annum, open to students who have obtained the diploma of the Royal College of Veterinary Surgeons; three veterinary scholarships of the value of 100*l.* per annum, open to students who have graduated with honours in science at a British university, and tenable for three years at a veterinary college in the United Kingdom. Applications for any of the foregoing scholarships must be made not later than July 17, on a form to be obtained on application from the secretary, Board of Agriculture and Fisheries, Whitehall Place, London, S.W.

THE Education Committee of the London County Council has recently had under consideration the recommendations of the Royal Commission on University Education in London. Two questions in particular have received careful attention: the constitution of the governing body of the University and its relation to the teaching institutions, and in particular to the Imperial College of Science and Technology; and the provision to be made for the education and examination of persons who are unable to devote their whole time to study. The committee approves generally the proposals of the Commission with reference to the government of the University of London, and is of opinion that no scheme for the reorganisation of the University will be satisfactory which does not provide that the Senate shall have full and effective control over the work of the University in the constituent colleges. The committee considers it essential that the Imperial College of Science and Technology shall become a constituent college of the University. It is also of opinion that the University of London should continue to confer degrees in honours as well as ordinary degrees on all British subjects in all faculties other than the faculty of medicine on the results of examination only, without regard to the course of training the candidate has pursued, or in the case of the higher degrees, on the submission of original work.

SOCIETIES AND ACADEMIES.

LONDON.

Zoological Society, June 9.—Prof. E. A. Minchin, vice-president, in the chair.—P. D. Montague: Report on the fauna of the Monte Bello Islands. The islands are barren limestone with a limited vegetation and some mangroves. The collections prove conclusively the entire dependence of the islands for their fauna on the neighbouring continent. Partial depopulations of the islands owing to drought are suggested, succeeded by repopulations by means of wind-borne forms from the south.—Dr. W. A. Cunnington: Parasitic Eucepoda collected by the third Tanganyika Expedition in 1904-5. The collection consisted of a very small number of specimens, these forms being evidently much rarer than the Argulidæ, which are also external parasitic Copepods infesting fish.—Dr. F. E. Beddard: A new species of avian Cestodes and a further discussion of the paruterine organ in Otiditænia.—R. I. Pocock: The facial vibrissæ of mammalia. In all the principal orders of the class, with one or two exceptions, the following groups of vibrissæ are present in some genera:—Mystaciale on the upper lip, submental on the chin and lower lip, superciliary over the eyes, gonial on the cheeks, and interramal on the throat behind the symphysis of the

jaw. Within the limits of the orders these tufts are present in the primitive genera, but more or fewer of them may be lost in the more specialised types. This fact, coupled with their prevalence in widely different types, points to the arrangement of the vibrissæ above indicated being exceedingly primitive.—R. I. Pocock: The feet and other external features of the Canidæ and Ursidæ. The paper dealt with the rhinaria, the facial vibrissæ, and the pads and interdigital integument of the feet in many of the genera of Canidæ and all the admitted genera of Ursidæ.—Dr. G. A. Boulenger: A second collection of batrachians and reptiles made by Dr. H. G. F. Spurrell in the Choco, Colombia.—D. M. S. Watson: *Procolophon trigoniceps*, a cotylosaurian reptile from South Africa.—A. W. Waters: Marine fauna of British East Africa and Zanzibar, from collections made by Cyril Crossland in the years 1901-2: Bryozoa—Cyclostomata, Ctenostomata, and Endoprocta. Out of the twenty-four species from these three groups, four are new; and, as the species mentioned are all from 10 fathoms or under, it will not occasion surprise that the number of Cyclostomata is but small.

Physical Society, June 12.—Prof. T. Mather, vice-president, in the chair.—Prof. C. H. Lees: Note on the connection between the method of least squares and the Fourier method of calculating the coefficients of a trigonometrical series to represent a given function or series of observations. In view of the number of alternative methods which have been suggested for calculating the coefficients of the terms of a Fourier series to represent a number of observations of a variable quantity, the author points out that the Fourier method gives the most probable values of the coefficients, since it makes the sum of the squares of the errors at the points of observation a minimum.—F. E. Smith: A magnetograph for measuring variations in the horizontal intensity of the earth's magnetic field. In the case of unifilar instruments for recording variations in H, if θ is the angle which the magnetic system makes with the magnetic meridian, M the moment of the magnet, and H the horizontal intensity of the earth's field, equilibrium results when $MH \sin \theta = T\phi$, where ϕ is the torsion on the fibre and T is a constant. In the instrument described ϕ may be made great or small, but high sensitiveness is secured by making ϕ great.—G. Shrimpton: The atomic weight of copper by electrolysis. Four copper cells separating two silver cells were run in series. The areas of the four copper kathodes increased from 10 to 50 s.cs. By plotting the weights of the copper deposits against the corresponding areas of the kathodes, and extrapolating to zero area, the weight of the deposit is corrected for under experimental conditions. The atomic weight of copper

$$= \frac{\text{corrected weight of Cu}}{\text{mean weight of Ag}} \times 107.88 \times 2.$$

The mean atomic weight for ten determinations + 63.563, with a mean error of ± 0.003 .—W. H. Apherpe: Note on an improvement in the Einthoven string galvanometer.

Mineralogical Society, June 16.—Dr. A. E. H. Tutton, president, in the chair.—Dr. J. Drugman: Childrenite from Crinnis mine, Cornwall, and eosporite from Poland, Maine. Analyses of childrenite from Crinnis mine showed it to contain even less manganese than the specimens from George and Charlotte mine. Eosporite from Poland is richer in manganese than that from Branchville, the only occurrence previously known. It is well crystallised, unlike the Crinnis mine childrenite.—R. H. Solly: Sartorite. From a goniometrical examination of two hundred crystals it is concluded that Dr. Trechmann's crystals, Nos 1